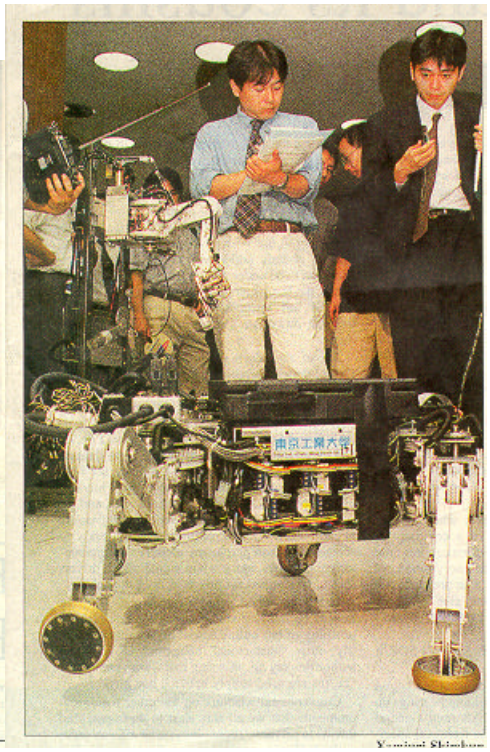
NEWS FROM ARO-FE (Aug 8, 2000): Robots May Seek Land Mines

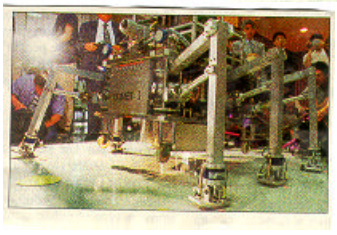
A robot designed to detect antipersonnel land mines was recently exhibited before Diet members and the press in Tokyo. Known as the Roller Walker, the four legged robot moves like a whirling beetle sliding across the surface of a pond. During the demonstration, each of the robot's legs rose in turn, and its disk-shaped feet swiveled to form wheels, allowing the machine to move smoothly across the floor. The robot was developed by a research team led by Prof. Shigeo Hirose of Tokyo Institute of Technology. Hirose is a member of a subcommittee of the Science Council of Japan, under the jurisdiction of the Prime Minister's Office, which is looking into how to promote research into the detection and removal of antipersonnel land mines.

When the robot moves over rocky or sandy areas, it uses its legs to walk. But it can use its wheels to move more quickly on relatively smooth surfaces such as asphalt roads. There is no driving force within the wheels themselves; instead, the robot makes headway by moving its legs like a roller skater.

Other robots developed by Universities and technical colleges were also on show during the demonstration. One was designed to move across mine fields by wriggling like a centipede, and another named "Comet" moves like a tank on Caterpillar-style belts. These robots are equipped high tech metal detectors, as well as infrared and echo sounder equipment.

About 110 million land mines still remain untouched, especially in developing countries. More than 2,000 people are killed or wounded every month around the world. It is estimated that it would take hundred of years to remove them all by hand, so high-performance robots are desperately needed.





Clockwise:
1. This robot moves by wriggling like a centipede
2. The "Roller Walker" land mine-detecting robot
3. "Comet" land mine-detector moves on a Caterpillar-style belt

From the Japanese Yomiuri Shimbun